

Abstract

A method for producing dimensionally accurate metal foam from a foamable, powder metallurgically produced metal semifinished product having a melting point $> 200\text{ }^{\circ}\text{C}$ involving: the introduction of material, which is capable of foaming above $200\text{ }^{\circ}\text{C}$, into a mold which has a coefficient of expansion of less than 3 K^{-1} . Controlled heating of the foamable material inside the mold is performed while radiators foam the material, and the foamed product formed thereby removed from the mold. A device for producing dimensionally accurate thermally foamed metal foam parts that is has a thin-walled mold, which is stable at the melting temperature of the metal foam and which has a coefficient of expansion of $< 3\text{ K}^{-1}$; a controllable irradiating device, and; a controller that controls the irradiating device based on the measurement given by a radiation measuring device.